

US007606555B2

(12) United States Patent

Walsh et al.

(54) LOCATION INFORMATION SYSTEM FOR A WIRELESS COMMUNICATION DEVICE AND METHOD THEREFOR

(75) Inventors: Patrick J. Walsh, Bloomingdale, IL

(US); Kevin Daniel Kaschke, Hoffman

Estates, IL (US)

(73) Assignee: AT&T Intellectual Property 1, L.P.,

Reno, NV (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 676 days.

(21) Appl. No.: 10/454,363

(22) Filed: Jun. 3, 2003

(65) Prior Publication Data

US 2004/0033795 A1 Feb. 19, 2004

Related U.S. Application Data

- (63) Continuation of application No. 09/497,954, filed on Feb. 4, 2000, now Pat. No. 6,603,977.
- (51) **Int. Cl. H04M 11/04** (2006.01)
- (52) **U.S. Cl.** **455/404.2**; 455/456.1; 455/41.2; 455/553.1

(56) References Cited

U.S. PATENT DOCUMENTS

3,906	,166 A	9/1975	Cooper et al
5,305	5,370 A	4/1994	Kearns et al.
5,345	5,448 A	9/1994	Keskitalo
5,388	3,147 A	2/1995	Grimes
5,479	,482 A	12/1995	Grimes
5,724	1,660 A	3/1998	Kauser et al

(Continued)

(45) **Date of Patent:** Oct. 20, 2009

OTHER PUBLICATIONS

US 7,606,555 B2

International Search Report for PCT/US03/40188; 4 pages; Nov. 23, 2004

(Continued)

Primary Examiner—Simon Sing

(10) Patent No.:

(74) Attorney, Agent, or Firm—Brinks Hofer Gilson & Lione

(57) ABSTRACT

A location information system (102) includes a controller (200), a location entry device (202), a memory device (204) and wireless communication units (206-209). The controller (200) receives location information from the location entry device (202), such as a keyboard or a global positioning satellite receiver, for storage in the memory device (204). The location information represents locations of predetermined areas (210-213), such as floors, rooms, hallways, stairways and elevators, associated with each of the wireless communication units (206-209) in a facility (110). A wireless communication unit (209) sends the location information to a wireless communication device (104), such as a cellular telephone device, over a short-range wireless communication channel (124), such as a radio frequency communication channel. Preferably, each of the wireless communication units (206-209) and the wireless communication device (104) include a short-range radio frequency transceiver designed to communicate over the short-range wireless communication channel (124) according to a Bluetooth technology specification. Preferably, the location information is used for E911 automatic location identification in the facility (110). The location information may be solicited or unsolicited from the location information system by the wireless communication device (104). When the location information is solicited, the location information is either pulled by the wireless communication device (104) or pushed by the location information system using a location information service.

56 Claims, 10 Drawing Sheets

